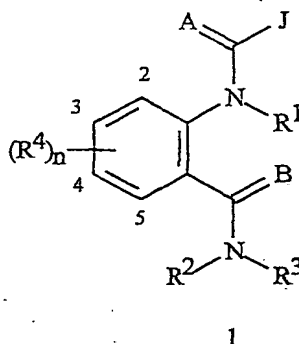


CLAIMS

What is claimed is:

1. A method for controlling arthropods comprising contacting the arthropods or their environment with an arthropodically effective amount of a compound of Formula 1, its *N*-oxide or agriculturally suitable salts



wherein

A and B are independently O or S;

each J is independently a phenyl or naphthyl group substituted with 1 to 2  $R^5$  and optionally substituted with 1 to 3  $R^6$ ;

or each J is independently a 5- or 6-membered heteroaromatic ring or an aromatic 8-, 9- or 10-membered fused heterobicyclic ring system wherein each ring or ring system is optionally substituted with 1 to 4  $R^7$ ;

$n$  is 1 to 4;

$R^1$  is H; or  $C_1$ - $C_6$  alkyl,  $C_2$ - $C_6$  alkenyl,  $C_2$ - $C_6$  alkynyl or  $C_3$ - $C_6$  cycloalkyl each optionally substituted with one or more substituents selected from the group consisting of halogen, CN,  $NO_2$ , hydroxy,  $C_1$ - $C_4$  alkoxy,  $C_1$ - $C_4$  alkylthio,  $C_1$ - $C_4$  alkylsulfinyl,  $C_1$ - $C_4$  alkylsulfonyl,  $C_2$ - $C_4$  alkoxy carbonyl,  $C_1$ - $C_4$  alkylamino,  $C_2$ - $C_8$  dialkylamino and  $C_3$ - $C_6$  cycloalkylamino; or

$R^1$  is  $C_2$ - $C_6$  alkylcarbonyl,  $C_2$ - $C_6$  alkoxy carbonyl,  $C_2$ - $C_6$  alkylaminocarbonyl,  $C_3$ - $C_8$  dialkylaminocarbonyl or  $C(=A)J$ ;

$R^2$  is H,  $C_1$ - $C_6$  alkyl,  $C_2$ - $C_6$  alkenyl,  $C_2$ - $C_6$  alkynyl,  $C_3$ - $C_6$  cycloalkyl,  $C_1$ - $C_4$  alkoxy,  $C_1$ - $C_4$  alkylamino,  $C_2$ - $C_8$  dialkylamino,  $C_3$ - $C_6$  cycloalkylamino,  $C_2$ - $C_6$  alkoxy carbonyl or  $C_2$ - $C_6$  alkylcarbonyl;

$R^3$  is H; G;  $C_1$ - $C_6$  alkyl,  $C_2$ - $C_6$  alkenyl,  $C_2$ - $C_6$  alkynyl,  $C_3$ - $C_6$  cycloalkyl, each optionally substituted with one or more substituents selected from the group consisting of halogen, G, CN,  $NO_2$ , hydroxy,  $C_1$ - $C_4$  alkoxy,  $C_1$ - $C_4$  haloalkoxy,  $C_1$ - $C_4$  alkylthio,  $C_1$ - $C_4$  alkylsulfinyl,  $C_1$ - $C_4$  alkylsulfonyl,  $C_2$ - $C_6$  alkoxy carbonyl,  $C_2$ - $C_6$  alkylcarbonyl,  $C_3$ - $C_6$  trialkylsilyl, or a phenyl, phenoxy

or 5- or 6-membered heteroaromatic ring, each ring optionally substituted with one to three substituents independently selected from the group consisting of C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>3</sub>-C<sub>6</sub> (alkyl)cycloalkylamino, C<sub>2</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl; C<sub>1</sub>-C<sub>4</sub> alkoxy; C<sub>1</sub>-C<sub>4</sub> alkylamino; C<sub>2</sub>-C<sub>8</sub> dialkylamino; C<sub>3</sub>-C<sub>6</sub> cycloalkylamino; C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl or C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl; or

R<sup>2</sup> and R<sup>3</sup> can be taken together with the nitrogen to which they are attached to form a ring containing 2 to 6 atoms of carbon and optionally one additional atom of nitrogen, sulfur or oxygen, said ring may be optionally substituted with 1 to 4 substituents selected from the group consisting of C<sub>1</sub>-C<sub>2</sub> alkyl, halogen, CN, NO<sub>2</sub> and C<sub>1</sub>-C<sub>2</sub> alkoxy;

G is a 5- or 6-membered nonaromatic carbocyclic or heterocyclic ring, optionally including one or two ring members selected from the group consisting of C(=O), SO or S(O)<sub>2</sub> and optionally substituted with 1 to 4 substituents selected from the group consisting of C<sub>1</sub>-C<sub>2</sub> alkyl, halogen, CN, NO<sub>2</sub> and C<sub>1</sub>-C<sub>2</sub> alkoxy;

each R<sup>4</sup> is independently H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>6</sub> haloalkyl, C<sub>2</sub>-C<sub>6</sub> haloalkenyl, C<sub>2</sub>-C<sub>6</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl; or

each R<sup>4</sup> is independently phenyl, benzyl or phenoxy, each optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>3</sub>-C<sub>6</sub> (alkyl)cycloalkylamino, C<sub>2</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl;

each R<sup>5</sup> is independently C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>6</sub> haloalkyl, C<sub>2</sub>-C<sub>6</sub> haloalkenyl, C<sub>2</sub>-C<sub>6</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, CO<sub>2</sub>H, CONH<sub>2</sub>, NO<sub>2</sub>, hydroxy, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> haloalkoxy, C<sub>1</sub>-C<sub>6</sub> alkylthio, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl,

C<sub>1</sub>-C<sub>6</sub> haloalkylthio, C<sub>1</sub>-C<sub>6</sub> haloalkylsulfinyl, C<sub>1</sub>-C<sub>6</sub> haloalkylsulfonyl, C<sub>1</sub>-C<sub>6</sub> alkylamino, C<sub>2</sub>-C<sub>12</sub> dialkylamino, or C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl, C<sub>3</sub>-C<sub>6</sub> trialkylsilyl; or

(R<sup>5</sup>)<sub>2</sub> when attached to adjacent carbon atoms can be taken together as -OCF<sub>2</sub>O-, -CF<sub>2</sub>CF<sub>2</sub>O-, or -OCF<sub>2</sub>CF<sub>2</sub>O-;

each R<sup>6</sup> is independently H, halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy or C<sub>2</sub>-C<sub>4</sub> alkoxycarbonyl; or

each R<sup>6</sup> is independently a phenyl, benzyl, phenoxy, 5- or 6-membered heteroaromatic ring or an aromatic 8-, 9- or 10-membered fused heterobicyclic ring system, each ring optionally substituted with one to three substituents independently selected from the group consisting of C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>3</sub>-C<sub>6</sub> (alkyl)cycloalkylamino, C<sub>2</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl;

each R<sup>7</sup> is independently H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>6</sub> haloalkyl, C<sub>2</sub>-C<sub>6</sub> haloalkenyl, C<sub>2</sub>-C<sub>6</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, CO<sub>2</sub>H, CONH<sub>2</sub>, NO<sub>2</sub>, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl, C<sub>3</sub>-C<sub>6</sub> trialkylsilyl; or

each R<sup>7</sup> is independently a phenyl, benzyl, benzoyl, phenoxy, 5- or 6-membered heteroaromatic ring or an aromatic 8-, 9- or 10-membered fused heterobicyclic ring system, each ring optionally substituted with one to three substituents independently selected from the group consisting of C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>3</sub>-C<sub>6</sub> (alkyl)cycloalkylamino, C<sub>2</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl;

provided that

(1) when A and B are both O, R<sup>2</sup> is H or C<sub>1</sub>-C<sub>3</sub> alkyl, R<sup>3</sup> is H or C<sub>1</sub>-C<sub>3</sub> alkyl and R<sup>4</sup> is H, halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, phenyl, hydroxy or C<sub>1</sub>-C<sub>6</sub> alkoxy, then one R<sup>5</sup> is other than halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxy or C<sub>1</sub>-C<sub>6</sub> alkoxy; or

(2) J is other than an optionally substituted 1,2,3-thiadiazole.

5 2. The method of Claim 1 wherein J is a phenyl group substituted with 1 to 2 R<sup>5</sup> and optionally substituted with 1 to 3 R<sup>6</sup>.

3. The method of Claim 2 wherein

A and B are both O;

n is 1 to 2;

10 R<sup>1</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl or C<sub>2</sub>-C<sub>6</sub> alkoxy carbonyl;

R<sup>2</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl or C<sub>2</sub>-C<sub>6</sub> alkoxy carbonyl;

15 R<sup>3</sup> is C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl or C<sub>3</sub>-C<sub>6</sub> cycloalkyl each optionally substituted with one or more substituents selected from the group consisting of halogen, CN, C<sub>1</sub>-C<sub>2</sub> alkoxy, C<sub>1</sub>-C<sub>2</sub> alkylthio, C<sub>1</sub>-C<sub>2</sub> alkylsulfinyl and C<sub>1</sub>-C<sub>2</sub> alkylsulfonyl;

one of the R<sup>4</sup> groups is attached to the phenyl ring at the 2-position or 5-position, and said R<sup>4</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl;

20 each R<sup>5</sup> is independently C<sub>1</sub>-C<sub>4</sub> haloalkyl, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl or C<sub>2</sub>-C<sub>4</sub> alkoxy carbonyl; or

25 (R<sup>5</sup>)<sub>2</sub> when attached to adjacent carbon atoms can be taken together as -OCF<sub>2</sub>O-, -CF<sub>2</sub>CF<sub>2</sub>O- or -OCF<sub>2</sub>CF<sub>2</sub>O-; and

each R<sup>6</sup> is independently H, halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkoxy or C<sub>2</sub>-C<sub>4</sub> alkoxy carbonyl, or

30 each R<sup>6</sup> is independently a phenyl or a 5- or 6-membered heteroaromatic ring, each ring optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>3</sub>-C<sub>6</sub> (alkyl)cycloalkylamino, C<sub>2</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxy carbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl.

4. The method of Claim 3 wherein

$R^1$  and  $R^2$  are both H;

$R^3$  is  $C_1$ - $C_4$  alkyl optionally substituted with halogen, CN,  $OCH_3$ ,  $S(O)_pCH_3$ ;

each  $R^4$  is independently H,  $CH_3$ ,  $CF_3$ ,  $OCF_3$ ,  $OCHF_2$ ,  $S(O)_pCF_3$ ,  $S(O)_pCHF_2$ , CN or halogen;

5 each  $R^5$  is independently  $CF_3$ ,  $OCF_3$ ,  $OCHF_2$ ,  $S(O)_pCF_3$ ,  $S(O)_pCHF_2$ ,  $OCH_2CF_3$ ,  $OCF_2CHF_2$ ,  $S(O)_pCH_2CF_3$  or  $S(O)_pCF_2CHF_2$ ;

each  $R^6$  is independently H, halogen or methyl; or phenyl, pyrazole, imidazole, triazole, pyridine or pyrimidine, each ring optionally substituted with  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  haloalkyl, halogen or CN; and

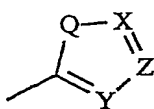
10 p is 0, 1 or 2.

5. The method of Claim 4 wherein  $R^3$  is *i*-propyl or *t*-butyl.

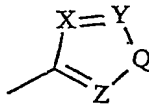
6. The method of Claim 1 wherein J is a 5- or 6-membered heteroaromatic ring optionally substituted with 1 to 4  $R^7$ .

7. The method of Claim 6 wherein

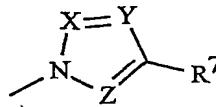
15 J is a 5- or 6-membered heteroaromatic ring selected from the group consisting of J-1, J-2, J-3, J-4 and J-5, each J optionally substituted with 1 to 3  $R^7$



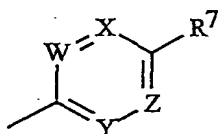
J-1



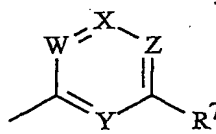
J-2



J-3



J-4



J-5

Q is O, S or  $NR^7$ ; and

20 W, X, Y and Z are independently N or  $CR^7$ , provided that in J-4 and J-5 at least one of W, X, Y or Z is N.

8. The method of Claim 6 or 7 wherein

A and B are O;

n is 1 to 2;

25  $R^1$  is H,  $C_1$ - $C_4$  alkyl,  $C_2$ - $C_4$  alkenyl,  $C_2$ - $C_4$  alkynyl,  $C_2$ - $C_6$  alkylcarbonyl or  $C_2$ - $C_6$  alkoxy carbonyl;

$R^2$  is H,  $C_1$ - $C_4$  alkyl,  $C_2$ - $C_4$  alkenyl,  $C_2$ - $C_4$  alkynyl,  $C_3$ - $C_6$  cycloalkyl,  $C_2$ - $C_6$  alkylcarbonyl or  $C_2$ - $C_6$  alkoxy carbonyl;

R<sup>3</sup> is H; or C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl or C<sub>3</sub>-C<sub>6</sub> cycloalkyl each optionally substituted with one or more substituents selected from the group consisting of halogen, CN, C<sub>1</sub>-C<sub>2</sub> alkoxy, C<sub>1</sub>-C<sub>2</sub> alkylthio, C<sub>1</sub>-C<sub>2</sub> alkylsulfinyl and C<sub>1</sub>-C<sub>2</sub> alkylsulfonyl;

one of the R<sup>4</sup> groups is attached to the phenyl ring at the 2-position, and said R<sup>4</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl or C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl; and

each R<sup>7</sup> is independently H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl or C<sub>2</sub>-C<sub>4</sub> alkoxycarbonyl; or a phenyl or a 5- or 6-membered heteroaromatic ring, each ring optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>3</sub>-C<sub>6</sub> (alkyl)cycloalkylamino, C<sub>2</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl.

9. The method of Claim 8, wherein J is selected from the group consisting of pyridine, pyrimidine, pyrazole, imidazole, triazole, thiophene, thiazole and oxazole, furan, isothiazole and isoxazole, each optionally substituted with 1 to 3 R<sup>7</sup>.

10. The method of Claim 9 wherein

J is selected from the group consisting of pyridine, pyrimidine, pyrazole, thiophene and thiazole, each optionally substituted with 1 to 3 R<sup>7</sup>;

R<sup>1</sup> and R<sup>2</sup> are both H;

R<sup>3</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl optionally substituted with halogen, CN, OCH<sub>3</sub>, S(O)<sub>p</sub>CH<sub>3</sub>;

each R<sup>4</sup> is independently H, CH<sub>3</sub>, CF<sub>3</sub>, OCF<sub>3</sub>, OCHF<sub>2</sub>, S(O)<sub>p</sub>CF<sub>3</sub>, S(O)<sub>p</sub>CHF<sub>2</sub>, CN or halogen;

each R<sup>7</sup> is independently H, halogen, CH<sub>3</sub>, CF<sub>3</sub>, OCHF<sub>2</sub>, S(O)<sub>p</sub>CF<sub>3</sub>, S(O)<sub>p</sub>CHF<sub>2</sub>, OCH<sub>2</sub>CF<sub>3</sub>, OCF<sub>2</sub>CHF<sub>2</sub>, S(O)<sub>p</sub>CH<sub>2</sub>CF<sub>3</sub>, S(O)<sub>p</sub>CF<sub>2</sub>CHF<sub>2</sub>; or phenyl, pyrazole, imidazole, triazole, pyridine or pyrimidine, each ring optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, halogen or CN; and

p is 0, 1 or 2.

11. The method of Claim 10 wherein J is a pyridine optionally substituted with 1 to 3 R<sup>7</sup>.

12. The method of Claim 11 wherein one R<sup>7</sup> is a phenyl optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen or CN.

13. The method of Claim 11 wherein one R<sup>7</sup> is a pyrazole, imidazole, triazole, pyridine or pyrimidine, each ring optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen or CN.

14. The method of Claim 10 wherein J is a pyrimidine optionally substituted with 1 to 3 R<sup>7</sup>.

15. The method of Claim 14 wherein one R<sup>7</sup> is a phenyl optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen or CN.

16. The method of Claim 14 wherein one R<sup>7</sup> is a pyrazole, imidazole, triazole, pyridine or pyrimidine, each ring optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen or CN.

17. The method of Claim 10 wherein J is a pyrazole optionally substituted with 1 to 3 R<sup>7</sup>.

18. The method of Claim 17 wherein one R<sup>7</sup> is a phenyl optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen or CN.

19. The method of Claim 17 wherein one R<sup>7</sup> is a pyrazole, imidazole, triazole, pyridine or pyrimidine, each ring optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen or CN.

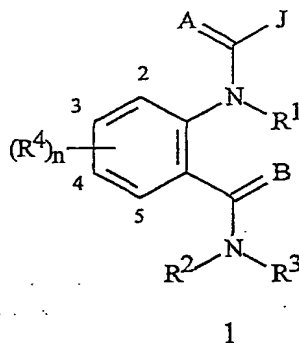
20. The method of Claim 19 wherein R<sup>7</sup> is a pyridine optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen or CN.

21. The method of Claim 1 comprising a compound of Formula 1 selected from the group consisting of:

3-methyl-N-(1-methylethyl)-2-[[4-(trifluoromethyl)benzoyl]amino]-benzamide,  
 2-methyl-N-[2-methyl-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-4-(trifluoromethyl)benzamide,  
 2-methyl-N-[2-methyl-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-6-(trifluoromethyl)-3-pyridinecarboxamide,  
 1-ethyl-N-[2-methyl-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-3-(trifluoromethyl)-1H-pyrazole-5-carboxamide,  
 1-(2-fluorophenyl)-N-[2-methyl-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-3-(trifluoromethyl)-1H-pyrazole-5-carboxamide,  
 1-(3-chloro-2-pyridinyl)-N-[2-methyl-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-3-(trifluoromethyl)-1H-pyrazole-5-carboxamide,  
 N-[2-chloro-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-1-(3-chloro-2-pyridinyl)-3-(trifluoromethyl)-1H-pyrazole-5-carboxamide,

3-bromo-1-(2-chlorophenyl)-*N*-[2-methyl-6-[[1-methylethyl)amino]carbonyl]phenyl]-1*H*-pyrazole-5-carboxamide, and  
 3-bromo-*N*-[2-chloro-6-[[1-methylethyl)amino]carbonyl]phenyl]-1-(2-chlorophenyl)-1*H*-pyrazole-5-carboxamide.

22. A compound of Formula 1, its *N*-oxides and agriculturally suitable salts



wherein

A and B are independently O or S;

optionally substituted with 1 to 3 R<sup>6</sup>;

or each J is independently a 5- or 6-membered heteroaromatic ring or an aromatic 8-, 9- or 10-membered fused heterobicyclic ring system wherein each ring or ring system is optionally substituted with 1 to 4 R<sup>7</sup>;

n is 1 to 4;

R<sup>1</sup> is H; or C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl or C<sub>3</sub>-C<sub>6</sub> cycloalkyl each optionally substituted with one or more substituents selected from the group consisting of halogen, CN, NO<sub>2</sub>, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>2</sub>-C<sub>4</sub> alkoxycarbonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino and C<sub>3</sub>-C<sub>6</sub> cycloalkylamino; or

R<sup>1</sup> is C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C(=A)J;

R<sup>2</sup> is H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl or C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl;

R<sup>3</sup> is H; C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, each optionally substituted with one or more substituents selected from the group consisting of halogen, CN, NO<sub>2</sub>, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl, C<sub>3</sub>-C<sub>6</sub> trialkylsilyl, or a phenoxy ring optionally substituted with one to three substituents independently selected from the group consisting of C<sub>1</sub>-



C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>3</sub>-C<sub>6</sub> (alkyl)cycloalkylamino, C<sub>2</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl; C<sub>1</sub>-C<sub>4</sub> alkoxy; C<sub>1</sub>-C<sub>4</sub> alkylamino; C<sub>2</sub>-C<sub>8</sub> dialkylamino; C<sub>3</sub>-C<sub>6</sub> cycloalkylamino; C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl or C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl; or

R<sup>2</sup> and R<sup>3</sup> can be taken together with the nitrogen to which they are attached to form a ring containing 2 to 6 atoms of carbon and optionally one additional atom of nitrogen, sulfur or oxygen, said ring may be optionally substituted with 1 to 4 substituents selected from the group consisting of C<sub>1</sub>-C<sub>2</sub> alkyl, halogen, CN, NO<sub>2</sub> and C<sub>1</sub>-C<sub>2</sub> alkoxy;

each R<sup>4</sup> is independently H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>6</sub> haloalkyl, C<sub>2</sub>-C<sub>6</sub> haloalkenyl, C<sub>2</sub>-C<sub>6</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl; or

each R<sup>4</sup> is independently phenyl, benzyl or phenoxy, each optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>3</sub>-C<sub>6</sub> (alkyl)cycloalkylamino, C<sub>2</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl;

each R<sup>5</sup> is independently C<sub>1</sub>-C<sub>6</sub> haloalkyl, C<sub>2</sub>-C<sub>6</sub> haloalkenyl, C<sub>2</sub>-C<sub>6</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxycarbonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, or C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl; or

(R<sup>5</sup>)<sub>2</sub> attached to adjacent carbon atoms can be taken together as -OCF<sub>2</sub>O-, -CF<sub>2</sub>CF<sub>2</sub>O-, or -OCF<sub>2</sub>CF<sub>2</sub>O-;

each R<sup>6</sup> is independently H, halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy or C<sub>2</sub>-C<sub>4</sub> alkoxycarbonyl; or

each R<sup>6</sup> is independently a phenyl, benzyl, phenoxy, 5- or 6-membered heteroaromatic ring or an aromatic 8-, 9- or 10-membered fused heterobicyclic ring system, each ring optionally substituted with one to three substituents independently selected from the group consisting of C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>3</sub>-C<sub>6</sub> (alkyl)cycloalkylamino, C<sub>2</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl;

each R<sup>7</sup> is independently H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>6</sub> haloalkyl, C<sub>2</sub>-C<sub>6</sub> haloalkenyl, C<sub>2</sub>-C<sub>6</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, CO<sub>2</sub>H, CONH<sub>2</sub>, NO<sub>2</sub>, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl, C<sub>3</sub>-C<sub>6</sub> trialkylsilyl; or

each R<sup>7</sup> is independently a phenyl, benzyl, benzoyl, phenoxy or 5- or 6-membered heteroaromatic ring 8-, 9- or 10-membered fused heterobicyclic ring system, each ring optionally substituted with one to three substituents independently selected from the group consisting of C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>3</sub>-C<sub>6</sub> (alkyl)cycloalkylamino, C<sub>2</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl;

provided that

- (i) at least one R<sup>4</sup> and at least one R<sup>7</sup> are other than H;
- (ii) J is other than an optionally substituted 1,2,3-thiadiazole;
- (iii) when J is an optionally substituted pyridine and R<sup>2</sup> is H, R<sup>3</sup> is other than H or CH<sub>3</sub>;
- (iv) when J is an optionally substituted pyridine, then R<sup>7</sup> cannot be CONH<sub>2</sub>, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl or C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl;
- (v) when J is an optionally substituted pyrazole, tetrazole or pyrimidine, then R<sup>2</sup> and R<sup>3</sup> cannot both be hydrogen.

23. The compound of Claim 22 wherein J is a phenyl group substituted with 1 to 2 R<sup>5</sup> and optionally substituted with 1 to 3 R<sup>6</sup>.

24. The compound of Claim 25 wherein

A and B are both O;

5 n is 1 to 2;

R<sup>1</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl or C<sub>2</sub>-C<sub>6</sub> alkoxy carbonyl;

R<sup>2</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>2</sub>-C<sub>6</sub> alkylcarbonyl or C<sub>2</sub>-C<sub>6</sub> alkoxy carbonyl;

10 R<sup>3</sup> is C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl or C<sub>3</sub>-C<sub>6</sub> cycloalkyl each optionally substituted with one or more substituents selected from the group consisting of halogen, CN, C<sub>1</sub>-C<sub>2</sub> alkoxy, C<sub>1</sub>-C<sub>2</sub> alkylthio, C<sub>1</sub>-C<sub>2</sub> alkylsulfinyl and C<sub>1</sub>-C<sub>2</sub> alkylsulfonyl;

one of the R<sup>4</sup> groups is attached to the phenyl ring at the 2-position or 5-position, and  
15 said R<sup>4</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl or C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl;

each R<sup>5</sup> is independently C<sub>1</sub>-C<sub>4</sub> haloalkyl, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl or C<sub>2</sub>-C<sub>4</sub> alkoxy carbonyl; or

20 (R<sup>5</sup>)<sub>2</sub> when attached to adjacent carbon atoms can be taken together as -OCF<sub>2</sub>O-, -CF<sub>2</sub>CF<sub>2</sub>O- or -OCF<sub>2</sub>CF<sub>2</sub>O-; and

each R<sup>6</sup> is independently H, halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkoxy or C<sub>2</sub>-C<sub>4</sub> alkoxy carbonyl, or

25 each R<sup>6</sup> is independently a phenyl or a 5- or 6-membered heteroaromatic ring, each ring optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>3</sub>-C<sub>6</sub> (alkyl)cycloalkylamino, C<sub>2</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxy carbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl.

25. The compound of Claim 26 wherein

R<sup>1</sup> and R<sup>2</sup> are both H;

35 R<sup>3</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl optionally substituted with halogen, CN, OCH<sub>3</sub>, S(O)<sub>p</sub>CH<sub>3</sub>;

each R<sup>4</sup> is independently H, CH<sub>3</sub>, CF<sub>3</sub>, OCF<sub>3</sub>, OCHF<sub>2</sub>, S(O)<sub>p</sub>CF<sub>3</sub>, S(O)<sub>p</sub>CHF<sub>2</sub>, CN or halogen;

each  $R^5$  is independently  $CF_3$ ,  $OCF_3$ ,  $OCHF_2$ ,  $S(O)_pCF_3$ ,  $S(O)_pCHF_2$ ,  $OCH_2CF_3$ ,  
 $OCF_2CHF_2$ ,  $S(O)_pCH_2CF_3$  or  $S(O)_pCF_2CHF_2$ ;

each  $R^6$  is independently H, halogen or methyl; or phenyl, pyrazole, imidazole,  
 triazole, pyridine or pyrimidine, each ring optionally substituted with  $C_1$ - $C_4$   
 alkyl,  $C_1$ - $C_4$  haloalkyl, halogen or CN; and

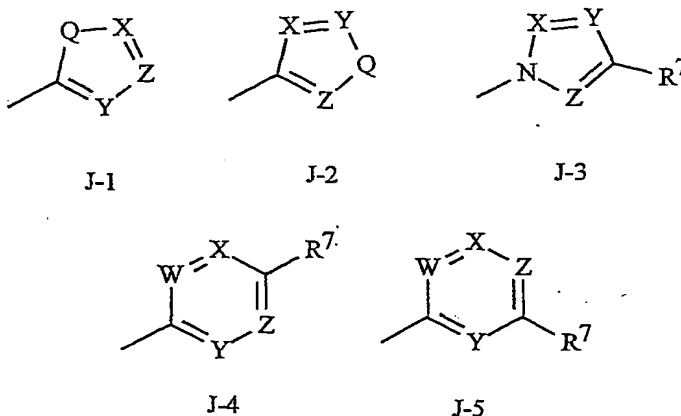
p is 0, 1 or 2.

26. The compound of Claim 25 wherein  $R^3$  is *i*-propyl or *t*-butyl.

27. The compound of Claim 26 wherein J is a 5- or 6-membered heteroaromatic ring  
 optionally substituted with 1 to 4  $R^7$ .

28. The compound of Claim 27 wherein

J is a 5- or 6-membered heteroaromatic ring selected from the group  
 consisting of J-1, J-2, J-3, J-4 and J-5, each J optionally substituted with  
 1 to 3  $R^7$ .



Q is O, S or  $NR^7$ ; and

W, X, Y and Z are independently N or  $CR^7$ , provided that in J-4 and J-5 at least one of  
 W, X, Y or Z is N.

29. The compound of Claim 27 or Claim 28 wherein

A and B are O;

n is 1 to 2;

$R^1$  is H,  $C_1$ - $C_4$  alkyl,  $C_2$ - $C_4$  alkenyl,  $C_2$ - $C_4$  alkynyl,  $C_2$ - $C_6$  alkylcarbonyl or  $C_2$ - $C_6$   
 alkoxy carbonyl;

$R^2$  is H,  $C_1$ - $C_4$  alkyl,  $C_2$ - $C_4$  alkenyl,  $C_2$ - $C_4$  alkynyl,  $C_3$ - $C_6$  cycloalkyl,  $C_2$ - $C_6$   
 alkylcarbonyl or  $C_2$ - $C_6$  alkoxy carbonyl;

$R^3$  is H; or  $C_1$ - $C_6$  alkyl,  $C_2$ - $C_6$  alkenyl,  $C_2$ - $C_6$  alkynyl or  $C_3$ - $C_6$  cycloalkyl each  
 optionally substituted with one or more substituents selected from the group

consisting of halogen, CN, C<sub>1</sub>-C<sub>2</sub> alkoxy, C<sub>1</sub>-C<sub>2</sub> alkylthio, C<sub>1</sub>-C<sub>2</sub> alkylsulfinyl and C<sub>1</sub>-C<sub>2</sub> alkylsulfonyl;

one of the R<sup>4</sup> groups is attached to the phenyl ring at the 2-position, and said R<sup>4</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl or C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl; and

each R<sup>7</sup> is independently H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> haloalkylsulfonyl or C<sub>2</sub>-C<sub>4</sub> alkoxycarbonyl; or a phenyl or a 5- or 6-membered heteroaromatic ring, each ring optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkynyl, C<sub>3</sub>-C<sub>6</sub> halocycloalkyl, halogen, CN, NO<sub>2</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>8</sub> dialkylamino, C<sub>3</sub>-C<sub>6</sub> cycloalkylamino, C<sub>3</sub>-C<sub>6</sub> (alkyl)cycloalkylamino, C<sub>2</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>6</sub> alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>8</sub> dialkylaminocarbonyl or C<sub>3</sub>-C<sub>6</sub> trialkylsilyl.

30. The compound of Claim 29 wherein J is selected from the group consisting of pyridine, pyrimidine, pyrazole, imidazole, triazole, thiophene, thiazole and oxazole, furan, isothiazole and isoxazole, each optionally substituted with 1 to 3 R<sup>7</sup>.

31. The compound of Claim 30 wherein

J is selected from the group consisting of pyridine, pyrimidine, pyrazole, thiophene and thiazole, each optionally substituted with 1 to 3 R<sup>7</sup>;

R<sup>1</sup> and R<sup>2</sup> are both H;

R<sup>3</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl optionally substituted with halogen, CN, OCH<sub>3</sub>, S(O)<sub>p</sub>CH<sub>3</sub>;

each R<sup>4</sup> is independently H, CH<sub>3</sub>, CF<sub>3</sub>, OCF<sub>3</sub>, OCHF<sub>2</sub>, S(O)<sub>p</sub>CF<sub>3</sub>, S(O)<sub>p</sub>CHF<sub>2</sub>, CN or halogen;

each R<sup>7</sup> is independently H, halogen, CH<sub>3</sub>, CF<sub>3</sub>, OCHF<sub>2</sub>, S(O)<sub>p</sub>CF<sub>3</sub>, S(O)<sub>p</sub>CHF<sub>2</sub>,

OCH<sub>2</sub>CF<sub>3</sub>, OCF<sub>2</sub>CHF<sub>2</sub>, S(O)<sub>p</sub>CH<sub>2</sub>CF<sub>3</sub>, S(O)<sub>p</sub>CF<sub>2</sub>CHF<sub>2</sub>; or phenyl, pyrazole,

imidazole, triazole, pyridine or pyrimidine, each ring optionally substituted with

C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, halogen or CN; and

p is 0, 1 or 2.

32. The compound of Claim 31 wherein J is a pyridine optionally substituted with 1 to 3 R<sup>7</sup>.

33. The compound of Claim 32 wherein one R<sup>7</sup> is a phenyl optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen or CN.

34. The compound of Claim 32 wherein one R<sup>7</sup> is a pyrazole, imidazole, triazole, pyridine or pyrimidine, each ring optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen or CN.

35. The compound of Claim 31 wherein J is a pyrimidine optionally substituted with  
5 1 to 3 R<sup>7</sup>.

36. The compound of Claim 35 wherein one R<sup>7</sup> is a phenyl optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen or CN.

37. The compound of Claim 35 wherein one R<sup>7</sup> is a pyrazole, imidazole, triazole, pyridine or pyrimidine, each ring optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl,  
10 halogen or CN.

38. The compound of Claim 32 wherein J is a pyrazole optionally substituted with 1 to 3 R<sup>7</sup>.

39. The compound of Claim 38 wherein one R<sup>7</sup> is a phenyl optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen or CN.

40. The compound of Claim 38 wherein one R<sup>7</sup> is a pyrazole, imidazole, triazole, pyridine or pyrimidine, each ring optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl,  
15 halogen or CN.

41. The compound of Claim 38 wherein wherein R<sup>7</sup> is a pyridine optionally substituted with C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, halogen or CN.

20 42. The compound of Claim 22 selected from the group consisting of:

3-methyl-N-(1-methylethyl)-2-[[4-(trifluoromethyl)benzoyl]amino]-benzamide,

2-methyl-N-[2-methyl-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-4-

(trifluoromethyl)benzamide,

2-methyl-N-[2-methyl-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-6-

25 (trifluoromethyl)-3-pyridinecarboxamide,

1-ethyl-N-[2-methyl-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-3-

(trifluoromethyl)-1H-pyrazole-5-carboxamide,

1-(2-fluorophenyl)-N-[2-methyl-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-3-

(trifluoromethyl)-1H-pyrazole-5-carboxamide,

30 1-(3-chloro-2-pyridinyl)-N-[2-methyl-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-3-

(trifluoromethyl)-1H-pyrazole-5-carboxamide,

N-[2-chloro-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-1-(3-chloro-2-pyridinyl)-3-

(trifluoromethyl)-1H-pyrazole-5-carboxamide,

3-bromo-1-(2-chlorophenyl)-N-[2-methyl-6-[[[(1-

35 methylethyl)amino]carbonyl]phenyl]-1H-pyrazole-5-carboxamide, and

3-bromo-N-[2-chloro-6-[[[(1-methylethyl)amino]carbonyl]phenyl]-1-(2-

chlorophenyl)-1H-pyrazole-5-carboxamide.

43. An arthropodicidal composition comprising an arthropodically effective amount of a compound of Formula 1 as described in Claim 1 and at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents.

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